

REMARKS

Administrative Overview

In the Office Action mailed on June 4, 2008, claims 1, 2, 5, 6, 8–18, 20, and 22–26 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,329,984 to Boss et al. (hereinafter “Boss”), and claims 3, 4, 7, 19, and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Boss.

The Applicants hereby amend claims 1, 2, 4–6, 11–14, 16, 17, and 22–25. Support for the claim amendments can be found throughout the Applicants’ specification, drawings, and claims as originally filed. No new matter is introduced by these amendments. After entry of the claim amendments, claims 1–26 will be pending in this application. Accordingly, the Applicants respectfully request reconsideration of claims 1–26 in light of the amendments made above and the arguments presented below, and the withdrawal of all rejections.

The Examiner’s rejections are addressed in the order in which they appear in the Office Action.

Interview Summary

The undersigned thanks the Examiner for his time and courtesy during the interview that took place on October 14, 2008. The undersigned notes that the discussion focused on the amendments and arguments presented herein. Accordingly, this paper is intended to constitute a proper recordation of the interview in accordance with MPEP § 713.04, and also to provide a full response to the Office Action mailed on June 4, 2008.

Amended Claims 1, 2, 5, 6, 8–18, 20, and 22–25, and Claim 26 are Patentable over Boss

Claims 1, 2, 5, 6, 8–18, 20, and 22–26 are rejected under 35 U.S.C. § 102(b) as being anticipated by Boss. The Applicants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See MPEP § 2131. The Applicants respectfully submit that Boss fails to meet this exacting standard as applied to Applicants’ independent claims 1, 14, and 26.

In various embodiments, Applicants’ invention relates to methods and systems for synchronizing, in a bandwidth-adaptive manner, consumer node representations of a dynamic data set with a source node representation of the dynamic data set. See, e.g., Specification at

para. [0001]. To enable the bandwidth-adaptive synchronization of the dynamic data sets, the methods and systems employ a communications service that receives communications from the source node and transmits communications to the consumer nodes. More specifically, the communications service receives, from the source node, both metadata information and data packets, which represent the current state of the source-node dynamic data set. The communications service then transmits selected metadata information and data packets to each consumer node **based on the bandwidth of the connection between that consumer node and the communications service**. See, e.g., Specification at para. **[0040]** and **[0042]**.

For example, with reference to FIG. 3 of Applicants' specification, a communications service 300 receives metadata packets and data packets from a source node 100, and transmits to a consumer node 150 over a **high-bandwidth** connection every received metadata packet and data packet. In contrast, the communications service 300 transmits to a consumer node 150'' over a **low-bandwidth** connection only a **subset** of the metadata packets and data packets received from the source node 100. More specifically, as illustrated in FIG. 3, the high-bandwidth-connected consumer node 150 receives metadata packets 310, 320, and 330 and data packets 0, 1, 2, 3, 4, and 5, while the low-bandwidth-connected consumer node 150'' receives only metadata packets 310 and 330 and data packets 0, 1, 2, 4, and 5. The communications service 300 does not transmit metadata packet 320 or data packet 3 to consumer node 150''. See, also, specification at para. **[0042]**. Nevertheless, because the consumer node 150'' receives, from the communications service 300, the most recent metadata packet that identifies each data packet representing the current state of the source node 100 dynamic data set (*i.e.*, metadata packet 330 identifying data packets 0, 4, and 5), the consumer node 150'' is still able to correctly synchronize its data set with that of the source node 100. **Specification at para. [0042]**.

As also illustrated in FIG. 3 of Applicants' specification, following the transmission of metadata packet 330 to consumer node 150'', communications service 300 transmits data packets 4 and 5 to consumer node 150''. In contrast, following the transmission of metadata packet 330 to consumer node 150, communications service 300 transmits only data packet 5 to consumer node 150, as data packet 4 was previously transmitted to the consumer node 150 (*i.e.*, following the transmission of metadata packet 320). Thus, in order to communicate with the consumer nodes 150, 150'' **in a bandwidth adaptive manner**, the communications service 300 may, following the transmission of a given metadata packet, select **different** sets of data packets

for transmission to the different consumer node 150, 150” – i.e., each set may include only those data packets responsive to the metadata information that were not previously transmitted to the particular consumer node in question. See, also, Specification at para. [0042].

Applicants' Amended Independent Claims 1 and 14: Applicants' amended independent claims 1 and 14 include limitations directed towards this type of **bandwidth-adaptive communication** between the source node and consumer nodes. For example, amended independent claim 1 recites, in part:

“(c) selecting, by the communications service, **first and second sets of the identified data packets** responsive to the received metadata information, **the first and second sets being different from one another;**

(f) transmitting, by the communications service to a first consumer node, the metadata information and the first set of identified data packets; and

(g) transmitting, by the communications service to a second consumer node **having a different bandwidth connection with the communications service than the first consumer node has with the communications service,** the metadata information and the second set of identified data packets.” (Emphasis added.)

Similarly, Applicants' amended independent claim 14 recites, in part:

“a communications service . . . configured to select i) **a first set of the identified data packets** for transmission, along with the metadata packet, to a first consumer node, and ii) **a second set of the identified data packets, different from the first set,** for transmission, along with the metadata packet, to a second consumer node **having a different bandwidth connection with the communications service than the first consumer node has with the communications service.**” (Emphasis added.)

Boss describes “methods and apparatus for task based application sharing in a graphic user interface such as Windows. A user, referred to as the host user, designates an application to be shared, referred to as a shared application. Another user at a remote location, referred to as the client user, shares control of the shared application. The shared application runs on and executes only on the host system.” Boss at col. 2, ln. 32–38. As described in Boss, “at **every** point where graphical device interface 102 makes a call to display driver 104, sensor application 107 inserts a jump instruction from display driver 104 to sensor application 107. **All** the information necessary for a given display driver to perform prompted line drawings and/or text drawings are retrieved and saved by sensor application 107 **for use in the application sharing**

process between client system 200 and host system 100.” Boss at col. 4, ln. 50–58 (emphasis added). “Sensor application 107 then formats a communication packet based upon the display information retrieved from graphical device interface 102 regarding the prompted drawings and transmits the communication packet over conferencing communication system 108 which transmits the communication packet to conferencing communication system 201 of client system 200.” Boss at col. 4, ln. 64 – col. 5, ln. 4.

Because Boss describes transmitting all communication packets generated by a host communication system 108 to a client communication system 201, Boss necessarily can not, and in fact does not, teach or suggest communicating with a variety of client communication systems **in a bandwidth-adaptive manner**, as recited in Applicants’ amended independent claims 1 and 14. More specifically, Boss does not teach or suggest transmission of a first set of the identified data packets to a first consumer node and a second set of the identified data packets, which is different from the first set, to a second consumer node that has a different bandwidth connection with the communications service than does the first consumer node. Instead, Boss’s method of communication would result in sending all data packets to every client node – i.e., sending **identical** sets of data packets to every client node.

Applicants’ Independent Claim 26: Applicants’ independent claim 26 recites, in part:

“(b) receiving, by a communications service from the source node, first metadata information identifying a first at least one data packet representing a first state of local display data . . .

(d) receiving, by the communications service from the source node, second metadata information identifying a second at least one data packet representing a second state of local display data . . .

(e) **generating, by the communications service, third metadata information representing the difference between the first at least one identified data packet and the second at least one identified data packet**, the third metadata information identifying a third at least one data packet;

(f) **transmitting, by the communications service to a consumer node, the third metadata information; and**

(g) transmitting, by the communications service to the consumer node, the third at least one data packet.

The Examiner appears to characterize Boss's conferencing communication system 108 as the communications service recited in Applicants' independent claim 26. But, even assuming this characterization to be accurate, Boss does not teach or suggest that the conferencing communication system 108 receives both first metadata information identifying a first at least one data packet and second metadata information identifying a second at least one data packet, generates third metadata information therefrom, and transmits the third metadata information to a consumer node, as recited in Applicants' independent claim 26. Instead, as described above, Boss' host conferencing communication system 108 simply receives communication packets from the sensor application 107 and transmits all of the communication packets to the client conferencing communication system 201. Boss at col. 4, ln. 50 – col. 5, ln. 4. Boss' host conferencing communication system 108 neither generates additional metadata information, nor transmits the generated additional metadata information.

Accordingly, the Applicants respectfully submit that Boss fails to teach or suggest all of the elements present in the Applicants' independent claims 1, 14, and 26. Therefore, the Applicants respectfully submit that independent claims 1, 14, and 26, and claims 2, 5, 6, 8–13 15–18, 20, and 22–25, which depend either directly or indirectly from either independent claim 1 or 14, are patentable over Boss. Accordingly, the Applicants respectfully request that this ground of rejection be reconsidered and withdrawn.

Claims 3, 4, 7, 19, and 21 are also Patentable over Boss

Claims 3, 4, 7, 19, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boss. The Applicants respectfully traverse this rejection as applied to the claims.

To demonstrate a prima facie case of obviousness, all of the limitations of the claim at issue must be taught or suggested by the prior art reference(s) relied upon in support of the rejection. See MPEP § 706.02(j) and § 2143. For at least the reasons set forth above, the Applicants respectfully submit that Boss does not teach or suggest all of the limitations of either one of the Applicants' amended independent claims 1 or 14, and therefore does not legally establish a prima facie case of obviousness of claims 3, 4, 7, 19, and 21, which depend therefrom. Therefore, the Applicants respectfully submit that claims 3, 4, 7, 19, and 21 are also patentable over Boss, and respectfully request that this ground of rejection be reconsidered and withdrawn.

CONCLUSION

In light of the foregoing, the Applicants respectfully submit that all of the pending claims are in condition for allowance. Accordingly, the Applicants respectfully request reconsideration, withdrawal of all grounds of rejection, and the allowance of all the pending claims in due course.

If the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting the allowance of this application, the Examiner is invited to call the undersigned at the telephone number identified below.

Respectfully submitted,

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